CITY OF KIRKLAND
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DEPARTMENT OF PUBLIC WORKS
PRE-APPROVED PLANS POLICY

Policy R-38 Transportation Impact Analysis Review (TIAR)

This policy establishes the requirements for a transportation impact analysis study and policies for mitigations to mitigate the transportation impacts of new developments. New development includes properties that are redeveloped or existing property with a new tenant that generates additional traffic. A transportation impact analysis (TIA) is a specialized study that focuses on the transportation impacts that a development will have on the surrounding transportation system. The TIA is an integral part of the development impact review process.

The purpose of a TIA study is to assess the impact that a development will have on the City's transportation system, including but not limited to peak periods of vehicle traffic conditions, transit users, pedestrians, bicyclists, safety, parking, driveway access and neighborhood livability. The TIA ensures that the traffic and transportation impacts of the proposed development are identified, evaluated, and mitigated as set forth in section G and H of this guideline. Furthermore, the requirements within this policy establish the transportation impact review to satisfy the requirements of the State Environmental Policy Act (SEPA), Chapter 43.21C RCW . The requirements within this policy further the city's Transportation Master Plan Policy T-5.5 that require new development to mitigate site specific and system wide transportation impacts.

To assist applicants in the preparation of the information needed for the TIA study, the City has established the following guidelines:

GENERAL REQUIREMENTS

If transportation concurrency review is required, the development must pass the transportation concurrency test prior to the scoping of the transportation impact analysis.

The TIA study must be conducted by a professional engineer registered in Washington, with expertise in transportation engineering, or a recognized transportation planning firm having experience in the preparation of transportation impact analysis and routine transportation engineering studies. The final report shall be stamped by the professional engineer responsible for conducting the TIA study.

The professional engineer performing the analysis should request approval of a scope of analysis from the City Transportation Engineer prior to commencement of the analysis. The intent is to reach agreement on the following:

- Roadways and intersections to be studied
- Information to be provided
- Analysis time periods, methods, and software to be used

- Technical parameters (saturation flow rates, peak hour factor, etc.) necessary to complete the analysis.

The City Transportation Engineer will respond in a timely fashion to this request.

The applicant must submit one electronic and one hard copy of the TIA report. If the development requires a SEPA review, the TIA report must be submitted through the Planning and Building Department. If SEPA review is not required, the TIA report can be submitted directly to the City Transportation Engineer or with the building or land surface permit. The review fee must be paid before the review process can begin.

A. Levels of Analysis

There are two levels of transportation impact analysis. The level of transportation impact analysis required is determined by the number of gross peak hour trips generated and SEPA regulations. Gross peak hour trips are the number of peak hour trips the proposed development will generate, excluding internal trips. Each development proposal that exceeds either of the analysis thresholds identified below shall include the appropriate transportation impact analysis with its the land use application for land use or design review approval.

Level One Transportation Impact Analysis Threshold:

A Level One Transportation Impact Analysis is required when the proposed land use change or development proposals will not trigger a SEPA review and generates more than five gross peak hour vehicle trips and less than 50 gross peak hour vehicle trips.

Level Two Transportation Impact Analysis Threshold:

A level two transportation impact analysis is required when the proposed land use change or development generates more than 50 gross peak hour vehicle trips or the development meets the threshold that requires State Environmental Policy Act (SEPA) review; some elements of an off-site transportation impact analysis may be required when the development does not generate more than 50 peak hour vehicle trips, but the City Transportation Engineer finds that the transportation impacts attributable to the development have the potential to significantly impact the safe and efficient operation of the existing transportation system.

The threshold for SEPA review includes but is not limited to (for more information, please contact the Planning and Building Department):

- Residential projects of 21 units or more;
- Farming structures of more than 30,000 square feet;
- Non-residential buildings of more than 12,000 square feet with associated parking of more than 40 stalls;
- Parking lots with more than 40 stalls; or
- Additions or modifications to, or replacement of, any building or facility if the proposal changes the character of the building or facility and/or the cumulative impacts make the total development no longer exempt.

Table 1. TIA Thresholds

TIA Thresholds	No analysis	Level 1 Analysis	Level 2 Analysis
SEPA Review Requires			Yes
Gross Peak Hour Trips[1]			
5 > trips	X		
5 < trips < 50		X	
50 or More			X

[1]Gross peak hour trips are the number of peak hour trips the proposed development will generate, excluding pass-by, diverted linked and internal trips.

B. Transportation Impact Analysis Study Requirements

Regardless of the level of transportation impact analysis, all TIA study reports must be submitted in electronic form with at least one hard copy along with the review fee. The site plan must be drawn to engineering scale. The transportation impact analysis study must be stamped by a professional engineer licensed in the State of Washington and be based on a scope previously approved by the City Transportation Engineer. The TIA study review process will not begin until the review fee is paid in full.

All new developments that require concurrency testing must pass the concurrency test before submitting the transportation impact analysis report or any other transportation review.

General Scope of Transportation Impact Analyses

Level One Transportation Impact Analysis:

At the minimum, Level One transportation impact studies must include the following information:

1. A description of existing and proposed land uses and development intensities, driveway locations, existing access easements, parking, loading area, trash collection location, and the site parcel number(s).
2. Daily, AM, (midday if applicable), and PM peak hour trip generations. If the development is phased, a phased trip generation summary is also required.
3. Anticipated build-out year for the proposed development.
4. Document any roadway and other transportation improvements that are within 300 feet of the development site that are under construction, programmed, or planned.
5. A description of the existing street system adjacent to the proposed development, including functional classification, number of traveled lanes, lane width, shoulder treatment, transit facilities, pedestrian facilities, bicycle path corridors, and traffic control at study intersections. A figure may be used to illustrate existing transportation facilities.
6. A vicinity map of the project area showing the public and private streets that will be impacted by the development.
7. A site plan illustrating the placement and design of internal (on site) features such as parking layout, access to public streets, site circulation, pedestrian circulation, delivery

and loading areas and internal public street layout. Hard copies of the site plan must be at 1:20 or 1:30 engineering scale.

8. The applicant provides a site plan showing all non-project driveways within 150 feet of the project's driveways for arterial streets and within 100 feet of the project site for non-arterial streets. Analyze the development's driveway access. Analyze the safe sight distance for the development driveways in accordance to the current Policy R-13 of the Public Works Pre-Approved Plans.
9. Some development may be unique and may require additional analysis, the city transportation engineer has the discretion to require additional analysis to ensure the safe and efficient operation of the existing transportation system.

Level Two Transportation Impact Analysis:

At the minimum, Level Two TIA studies must include the following information:

1. Level One transportation impact analysis and the information required in the Level One analysis.
2. Calculate the proportional share impact to determine the significantly impacted intersections required to be analyzed. This analysis will establish the minimum study area. A proportional share impact calculation worksheet is available at https://www.kirklandwa.gov/Government/Departments/Development-Services-Center/Tools-and-Resources/Transportation/Transportation-Impact-Analysis-Guidelines or from the City Transportation Engineer.
3. Provide a description of other developments in the study area that are under construction, approved, or pending approval, as well as roadway and other transportation improvements in the study area that are under construction, programmed, or planned.
4. Calculate the level of service for all significant intersections as determined by the proportional share impact calculations, and any other intersections that the City Transportation Engineer believe to be significant. The following intersections are deemed to be significant intersections:
    - All signalized intersections impacted by more than 1% proportional impact
    - Significant unsignalized intersections impacted by more than 1% proportional impact
    - All development driveways
    - Other intersections identified by the City Transportation Engineer.
5. Analyze the impact of the development traffic within the study area, including but not limited to, the level of impact to significant intersections, adjoining developments, driveways within 150 feet of the development's driveway(s), pedestrians, bicycle, public transit facilities, existing or potential high collision areas (as determined by the City Transportation Engineer) and any other public facilities identified by the City Transportation Engineer.
6. Analyze existing conditions. The applicant analyzes the existing a.m., midday, and/or p.m. peak hour LOS using the operational method in the most recent Highway Capacity Manual. The City Transportation Engineer provides turning movement counts where current traffic counts are available; otherwise, the applicant collects the appropriate traffic counts. The existing traffic counts other than the City's annual traffic counts must not be older than 12 months from the time of the analysis.

7. Analyze the future conditions **without** the development traffic. The applicant calculates the LOS for the significant intersections for the year the project is anticipated to be fully developed.
    a. The City Transportation Engineer supplies information on the appropriate level of background traffic, including traffic from pipeline projects that have received a passing Concurrency Test Notice, and are planned to be built within the build-out year of the proposed development. If the development is phased, a LOS analysis for each phase may be required.
    b. Unless directed otherwise by the City Transportation Engineer, the pipeline projects traffic volumes and a 2% per year compounded growth factor shall be added to the existing traffic volumes to forecast future traffic condition. The City will provide the future traffic volumes at signalized intersections unless existing traffic is not available for the study intersections.
    c. Only the six-year capital improvement projects that are fully funded and scheduled to be completed by the time the proposed development is anticipated to be built may be considered in the level of service calculation for future conditions.
8. Analyze the future conditions **with** the development traffic but **without** mitigation. The applicant calculates the LOS for the significant intersections for the year the project is fully developed. If the development is phased, a LOS analysis for each phase may be required.
9. If mitigation is required, analyze the future conditions with the development traffic **and** proposed mitigation. The applicant calculates the LOS for the significant intersections that did not meet the LOS standards contained in Table 2 in section G. If the development is phased, a LOS analysis for each phase may be required.
10. Analyze transportation safety impacts. At the minimum, crash analysis shall be done for all significant intersections, roadway segments that surround the site, and any other intersections that the City Transportation Engineer believes to be significant. Crash data may be requested from the City by contacting David Gourlie, Engineering Program Assistant (DGourlie@kirklandwa.gov or 425-587-3867). The applicant shall supplement the crash data from the City with crash data from the Washington State Patrol. The crash analysis shall analyze crash frequency, types and patterns. It will also identify appropriate mitigating measures. Subsequently, the applicant analyzes and comments upon the impact of the project given the safety history of surrounding transportation network.
11. The applicant analyzes and comment on the project access and its impacts to pedestrians, cyclists, transit, on-site circulation, adjacent driveways and/or intersections.
12. The TIA report must include figures showing the future Daily, AM, (midday if applicable), and PM peak turning volumes at all studied intersections for all three conditions - existing, future without the development and future with the development. If the development is phased and a LOS analysis for each phase is required, then a map of traffic volumes for each phase is also required.
13. In addition to the intersection analysis for the AM and PM peak periods, other intersection analyses such as, but not limited to pedestrian, bicycle and site circulation; delivery and loading areas; parking demand and utilization; traffic queuing and gap analysis; nonmotorized transit operations and rider access; or traffic signal system operations and coordination may be needed depending on the project. In addition to intersection analysis, a corridor and peak direction analyses such as, but not limited to

travel time or origin/destination analyses may be required. Additionally, analysis of midday impacts may be required. The required analysis will be determined in coordination with the City traffic engineer during the TIA scoping process.

14. Document all assumptions and provide the data sources used in TIA report.
15. Details on the trip generation, crash data, traffic volumes, parking data, other data and references, LOS calculations and other calculations should be provided in the appendix of the TIA report.

C. Development Trip Generation

1. If available, the calculation of trip generation shall be based on the current edition of the ITE Trip Generation Report. When both are available, the use of the fitted curve equation or the average rates will be determined based on the methodology described the ITE Trip Generation Handbook or as required by the City Transportation Engineer.
2. The applicant's transportation engineer may propose an alternate trip generation rate to the ITE rates for staff review and approval. If the proposed project does not fit the land use within the ITE Trip Generation Report or the City Transportation Engineer deems the ITE trip generation data insufficient or not reliable, the applicant shall perform an independent trip generation study approved by the City Transportation Engineer. The professional engineer performing the analysis shall request approval of the trip generation study methodology from the City Transportation Engineer prior to commencement of the study.

   At the minimum, three days of traffic count data are required for the trip generation study. The traffic count data collection must be done for three consecutive typical days (Tuesday, Wednesday, and Thursday) unless the land use has a peak trip generation outside of the typical weekdays. Consideration of transportation demand management (TDM) to reduce the trip generation forecast will be evaluated on a case-by-case basis. When possible, independent trip generation data shall be developed by measurement rather than estimation.
3. Consistency in trip generation shall be maintained between the transportation concurrency submittal, the TIA report and independent transportation impact fee calculation. This means that if a non-ITE rate is developed for concurrency testing and the TIA report, the same rate shall be used for an independent transportation impact fee calculation, if an independent impact fee calculation is requested by the applicant (see the Kirkland Municipal Code, Chapter 27.04.040).
4. The number of trips generated by the existing land use may be deducted from the number of trips generated by the proposed land use. Trips that would have been generated by buildings that have been vacant for more than 12 months may not be deducted unless they were captured in the City's most current annual traffic count data.
5. Rates may be adjusted to account for pass-by, diverted, and internal trips; the use of such adjustments will be considered on a case-by-case basis. Net new trips will include diverted linked trips. The summary trip generation table shall be accompanied by a detailed table showing all the trip generation components.
6. The trip generation should also include a discussion of trip types and any trip credits for existing uses on the project site. The trip rate credit discussion should be supported by actual data and/or published reports in transportation and traffic engineering journals.

D. Traffic Distribution and Assignment

For developments generating more than 50 peak hour trips, the Public Works Department will provide to the applicant information concerning how PM peak project traffic travels on the roadway network in the form of a distribution analysis or PM peak link volumes, depending on the project. The manner in which project traffic uses the network is estimated using the Bellevue-Kirkland-Redmond Transportation Model (BKR Model). The location of project driveways and any new streets, as well as local traffic characteristics may result in needing to modify the project traffic circulation pattern within the vicinity of the project site forecasted by the BKR Model. The applicant may suggest a manual adjusted trip assignment to the City by providing traffic distribution and assignment data for City staff review and approval.

Within two weeks upon receiving the trip distribution percentage from the City Transportation Engineer, the engineering consultant shall provide to the City Transportation Engineer the AM and PM peak hour traffic assignment at the project driveways and all signalized intersections that are impacted by more than 10 peak hour trips.

E. Proportional Share Impact Calculation

A proportional share impact calculation is required as part of the Level Two transportation impact analysis. Signalized intersections that are impacted by the proposed development by 1% or more are considered to be "significant intersections"; thus, are required, at the minimum, to be analyzed for level of service and crash analysis. In addition, other unsignalized and signalized intersections may be required by the City Transportation Engineer as deemed necessary to evaluate the project's impacts. Intersections adjacent to the project's frontage are significant intersections.

F. Level of Service Analysis

The level of service analysis shall be done in accordance with the latest version of the Highway Capacity Manual using Highway Capacity Software (HCS), Synchro software or other software approved by the City Transportation Engineer.

The level of service calculation for signalized intersections for existing, future with development and future without development conditions shall be based on the City's signal phasing and operational parameters. The signal parameters may be requested from Iris Cabrera, Transportation Engineer (icabrera@kirklandwa.gov or 425-587-3866) or Daniel Rawlings, Transportation Engineer (Drawlings@kirklandwa.gov or 425-587-3819). For the mitigated future with project condition, the applicant may propose an optimized signal phasing/setting, but it must comply with the City's signal parameters and be approved by the City Transportation Engineer.

G. Adopted Levels of Service (LOS)

The City of Kirkland adopts the SEPA "significant adverse environmental impacts" standard and the Highway Capacity Method of level of service. Table 2 identifies the City's transportation level of service standards.

Table 2. Intersection LOS Standards

Peak Hour Intersection LOS with project traffic Signalized intersection- use intersection average, unsignalized intersection- use minor approach impacted by project.	Mitigation Required?
A thru D	**No.**
E	**Yes**, If intersection proportional share ≥ 15%
F	**Yes**, If intersection proportional share ≥ 5%

H. Installation of Mitigation and Improvements.

Table 2 is used to determine when the level of service mitigation is required. The intention of the intersection mitigation is to reduce a project's impact on a given intersection or provide the necessary transportation mitigation to attain the next better LOS grade as follows:

- If the level of service at a "significant intersection" is forecasted to operate at LOS-E and the proposed development impacts that intersection by 15% or more, then transportation mitigation is required to address the impact by maintaining the intersection current LOS-E.
- If the level of service at a "significant intersection" is forecasted to operate at LOS-F and the proposed development impacts that intersection by 5% or more, then transportation mitigation is required to address the impact by not increasing the delay[1] from the future condition without the project traffic. If the intersection delay[1] cannot be improved because the right-of-way is not available to improve the delay[1], then the applicant must maintain the letter grade level of service for the future condition without the development's traffic, reduce the delay[1] for the intersection, and proposed other alternative mitigation(s) to improve the traffic flow near and/or through the intersection such as but not limited to corridor improvements, transit improvements, and/or nonmotorized improvements. The alternative mitigation shall be reviewed and approved on a case-by-case basis by the City Transportation Engineer.

Table 3. Mitigation Requirements

Peak Hour Intersection LOS with Project Traffic	**Mitigation Required**	**Mitigation LOS Target**	**Alternative Targets**
LOS E	Yes, If intersection proportional share ≥ 15%	LOS E	
LOS F	Yes, If intersection proportional share ≥ 5%	Maintain vehicle delay from Future without Project Traffic condition	• Maintain the letter grade level of service for the Future without Project Traffic • Reduce the delay[1] for the intersection • Propose other alternative mitigation(s) to improve the traffic flow near and/or through the intersection

1. Intersection delay means intersection signal delay for signalized intersections and approach vehicle delay for unsignalized intersections.

In addition, installation of site-specific improvements may be required, or done voluntarily, to mitigate the development's transportation impacts on nonmotorized modes and transportation safety. The type of the required improvements is determined on a case-by-case basis and depend upon the significance of the development impacts to roadway and intersection performance, safety, specific access, and circulation needs, neighborhood impacts, and impacts on pedestrian and transit facilities. Required improvement shall be constructed or implemented prior to the occupancy of the development. Examples of transportation improvements include, but are not limited to the following:

- Construction of new pedestrian or multi-use paths or trails, access leading to the development
- Construction of acceleration and deceleration lanes, or turn lanes at intersections
- Installation of traffic control devices for driveways, paths, trails, and roads, such as traffic signals, warning beacons, signs, lane marking, etc.
- Installation of pedestrian improvements such as crosswalks, rectangular rapid flashing beacons (RRFBs), etc.
- Installation of transit improvements such as pedestrian connection to a transit facility, bus shelter, etc.
- Installation of neighborhood traffic calming devices
- Funding of a neighborhood traffic calming improvement project
- Contribution to a transportation corridor improvement
- Contribution to the City's transportation demand management program

Additional voluntary transportation improvements proposed must be completed within 6 years from the issuance of the development's final building permit

Developments are exempt from constructing any identified transportation improvements that are a part of a city's planned transportation project noted as "used to determine Impact Fee rate" in the Transportation Capital Facilities Plan if the identified transportation improvements are fully funded within the current 6-year CIP plan. However, additional mitigation necessary to meet the LOS standards that are not part of the current 6-year CIP scope must be constructed concurrent with the development and the cost for the mitigation will be entirely borne by the new development and the additional mitigation may not be credited against the transportation impact fee that the development has to pay.

If the transportation improvements necessary to mitigate the development's impact are identified in the 6-year CIP, Transportation Master Plan or other approved planning document, then the development is required to construct the improvement consistent with the plan. The development may not make partial improvement, except in cases where the partial improvement fully mitigates the development's impact, and it is possible to phase implementation of the planned project. Reasons the planned project could not be phased include, but are not limited to, the phased project creates an unsafe condition, the phased project would not meet city engineering standards, or the phased project creates an undue burden on the community. Phasing a planned project must be approved by the City Transportation Engineer.

For example, if Project A included a northbound right-turn lane and a southbound left-turn lane, and it is not possible to separate the improvement into two separate projects because constructing only one of the two turn lanes would create an unsafe condition, then the development must construct the entire improvement. However, if those two improvements are identified as separate projects, then the developer may construct the project(s) that mitigate the development's impact.

If Project B included only a northbound right-turn lane that is already funded by transportation impact fee and does not mitigate the development impact, but an additional southbound left-turn lane is required to mitigate the development impact and is feasible to construct as a separate project, then the applicant is responsible to construct the southbound left-turn lane prior to building occupancy. Otherwise, the applicant may elect to reduce the size of development to meet the level of service or postpone the development until the necessary improvement is constructed. The example below describes when mitigation is exempt if the required mitigation project is a 6-year CIP project.

Example:

Improvements required to meet LOS standard at impacted intersections	**Is it an impact fee funded improvement?**	**Is it fully[1] funded in the 6-year CIP?**	**Required to be mitigated by the development?**
NE 116th Street/124th Avenue NE	No	No	Yes
Juanita Drive/NE 122nd Place	No	Yes	No
Market Street/13th Avenue West	Yes	Yes	No
Central Way/4th Avenue	Yes	No	Yes

1. Fully funded means the improvement project has 100% secured funding.

I. Internal Road

Internal roads, driveways, and drive aisles, whether public or private, should be analyzed for safe and efficient internal traffic circulation and shall be designed to meet the Public Works Pre-Approved Plans standards.

J. Level II Transportation Impact Analysis Report Format

The scope of analysis must be pre-approved by the City Transportation Engineer. The transportation impact analysis report shall include the following:

Cover Page

Title, date, development permit number, name of the development, professional license engineer stamp.

Table of Content

Project Description
Executive Summary
Existing Conditions
Future Conditions without Project Conditions
Future conditions with Project Conditions
Conclusion, Mitigations and Recommendations
List of Figures
List of Tables
List of Appendices

Project Description:

A. A description of ***existing*** and ***proposed*** land uses and development intensities. This section should include (but not be limited to):
    a. Project name, location, size of project (including building sizes and their land uses), total development area (total acreage of the subject property if the project trip generation is based on acreage.)
    b. The site parcel number(s).
    c. Number of parking stalls if applicable (standard, compact and handicap).
    d. Type and number of access points
    e. The number and location of bicycle parking (racks and lockers).
    f. Location of loading zone(s), if applicable.
    g. Location(s) of trash collection, if applicable.
    h. Proposed on-street parking, if applicable.
    i. Existing access easements.
    j. and any other proposed transportation related elements or voluntary transportation mitigation.
B. Daily, AM, mid-day if applicable, and PM peak hour trip generations.
C. Anticipated build-out year for the proposed development and anticipated construction phasing if it is a phased development.
D. A site plan that shows proposed building locations, property line and road setbacks, existing and proposed parking lot layouts, and if applicable, driveways and intersections within 150 feet of the project site. The site plan shall be consistent with any associated land use planning actions and/or development permits.

E. List of intersections to be analyzed in the report.

Existing Condition:

A description of the existing street system within the study area including:

a. An existing site plan or illustration of the current use, including driveways and nonmotorized connection to the project site.
b. If applicable, a description of the existing site required transportation and parking management plans and any other conditions of approval for the project site.
c. Street functional classification, number of traveled lanes, lane width, shoulder treatment, median types, sidewalk width, bicycle path corridors, transit facilities and services and traffic control at the intersections analyzed in the report. A figure may be used to illustrate existing transportation facilities.
d. Pedestrian crossing within 300 feet of the project site.
e. Transit routes and headways within the study area.
f. On-street parking inventory along the project frontage and within 200 feet of the project site.
g. On-street parking restrictions.
h. A figure illustrating the existing daily and peak hours traffic volumes on the street or streets fronting the project site and at the intersections analyzed in the report. Existing traffic volumes may be available from the City. If not, the applicant is required to collect traffic volume data. Traffic volume data collection must be made at least one week from a holiday week.
i. The AM, midday if applicable, and PM peak hour level of service for the intersections analyzed in the report.
j. A table summarizing the proportional share impact calculation results for the intersections analyzed in the report.
k. At the minimum, the most recent 3-year historical crash data for the streets fronting the project site and at the intersections analyzed in the report.
l. When applicable, provide a critical gap analysis at the site driveways and/or at the impacted intersections for peak periods. The critical gap analysis shall be based on measurements.

Future Conditions:

A. Future without Project conditions

Provide a description of:

a. Any transportation improvement projects in the City of Kirkland current 6-year Capital Improvement Plan.
b. Any transit improvement projects within the next 6 years.
c. If different from the existing condition, transit routes and headways within the study area.
d. If different from the existing condition, nonmotorized facilities connecting to the site.
e. If different from the existing condition, Pedestrian crossings within 300 feet of the project site.
f. If different from existing condition, on-street parking inventory.

g. Any pipeline developments to be constructed within the proposed project's build-out year.
h. Figures showing the daily and peak hours traffic volumes on the street or streets fronting the project site and at the intersections analyzed in the report.
i. Description of the forecasted traffic volumes for the build-out year without the proposed project.
j. The future without project conditions level of service for the intersections analyzed in the report.

B. Future with Project conditions

Provide a description of:

a. The proposed development daily, AM and PM peak hour trip generations. The trip generation calculations shall be based on the latest ITE Trip Generation Manual unless the data are unreliable or if there is more reliable local data available. A trip generation study may be proposed by the applicant but must be approved by the City Transportation Engineer. If the ITE trip generation data is unreliable, the applicant is required to complete a trip generation study approved by the City Transportation Engineer.
b. If the project is to be developed in phases, the trip generation table should reflect the phased development.
c. The development trip distribution based on the BKR transportation forecast model shall be presented as a figure.
d. The development trip assignment shall be presented as a figure. Show the daily, PM peak and AM peak hour traffic assignment for gross project trips and net new project trips.
e. A table summarizing the proportional share impact calculation results for the intersections analyzed in the report, preferably to be included within the future LOS summary table.
f. Figures showing the cumulative daily and peak hours traffic volumes with the proposed development traffic assignment on the street or streets fronting the project site and at the intersections analyzed in the report.
g. The future with project conditions level of service for the intersections analyzed in the report.
h. The level of service and queuing analysis for the project driveways.
i. A table summarizing the level of service results with the proportional share calculation result.
j. Queuing analysis for any intersections within 150 feet of the site driveways.
k. Sight distance analysis for the site driveways.
l. When applicable, provide a critical gap analysis at the site driveways and/or at the impacted intersections for the peak periods.
m. When applicable, provide an on-street parking demand and utilization study.
n. When applicable, a traffic signal warrants based on the Manual on Uniform Traffic Control Devices (MUTCD).

C. Conclusion, Mitigations and Recommendations

a. Summarize the conclusion of the development impacts, all proposed traffic mitigation measures, and recommendations.

D. Appendices

a. Traffic count data
b. Trip Generation data and calculations
c. Level of Service calculation results
d. Parking data
e. Queue data
f. Gap analysis data
g. Signal warrant results and calculations
h. Crash data
i. Supporting references used in the TIA analysis

All pages must be numbered.